



App. No. 10/817,265
Response dated Mar. 28, 2006
Reply to Office Action of Dec. 28, 2005

REMARKS / ARGUMENTS

Claims 1-20 remain in the application, all of which stand rejected.

1. Rejection of Claims 1-3, 5, 7-17 and 20 Under 35 USC 103(a)

Claims 1-3, 5, 7-17 and 20 stand rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter "Davidson") in view of Thomson et al. (U.S. Pat. No. 6,554,469 B1; hereinafter "Thomson").

In applicants' Amendment dated September 28, 2005, and with respect to claim 1, applicants argued that Davidson does not disclose 1) a constant current source that is "ON-CHIP" (i.e., part of an integrated circuit), or 2) an analog to digital converter that is "ON-CHIP". The Examiner now cites Thomson as showing an "on-chip" constant current source.

Applicants have reviewed Thomson in its entirety and cannot determine where Thomson discloses an "on-chip" constant current source. Although Thomson discloses a current source 12 that may include a number of transistors, Thomson does not indicate that the transistors are formed on a common substrate. Nor does Thomson mention that the transistors are formed on the same substrate as the temperature sensor 10. In fact, as far as applicants can ascertain, Thomson does not say anything about where or how the components of its temperature sensor are formed and/or distributed. If the Examiner wishes to maintain his rejection over Davidson and Thomson, applicants ask that the Examiner specify where, precisely, Thomson teaches a constant current source that is either 1) "on-chip", or 2) included in the same integrated circuit as a thermal diode (or even Thomson's temperature sensor 10).

Even assuming, *arguendo*, that Thomson does teach an "on-chip" constant current source, and that one of ordinary skill in the art would have found it obvious to combine Thomson's teachings with Davidson's, applicants believe that the combined teachings of Davidson and Thomson still fail to show each and every limitation of

their claim 1. For example, neither Davidson nor Thomson show an “on-chip” analog to digital converter. Furthermore, while Thomson's temperature sensing system is obviously structurally and functionally different from what is recited in claim 1, Davidson's temperature measurement system is also different from that which is recited in claim 1.

As previously argued by applicants, Davidson's temperature measurement system appears to be similar to the temperature measurement system disclosed in paragraphs [0016] and [0017] of applicants' specification. This system, however, is different than the system which is set forth in claim 1. Specifically, Davidson's system requires the generation of two currents, and the measurement of two voltages, whereas the integrated circuit of applicants' claim 1 outputs a digital representation of a single “forward bias voltage”, which single voltage measurement can be used to calculate a temperature as set forth in claim 2.

Claim 1 is believed to be allowable for at least the above reasons. Claims 2, 3 and 5 are believed to be allowable, at least, because they depend from claim 1. Claim 7 is believed to be allowable, at least, because it too recites a constant current source, as well as a comparator, that are on-chip. Claims 8-17 and 20 are believed to be allowable, at least, because they depend from claim 7.

2. Rejection of Claims 4 and 19 under 35 USC 103(a)

Claims 4 and 19 stand rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter referred to as “Davidson”) in view of Vergis (U.S. Pat. No. 6,453,218 B1).

Claims 4 and 19 are believed to be allowable, at least, because they respectively depend from claims 1 and 7, and because Vergis does not teach that which is missing from Davidson. See, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claims 1 and 7.

3. Rejection of Claim 18 under 35 USC 103(a)

Claim 18 stands rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter referred to as "Davidson") in view of Audy et al. (U.S. Pat. No. 5,195,827 A; hereinafter referred to as "Audy").

Claim 18 is believed to be allowable, at least, because it depends from claim 7, and because Audy does not teach that which is missing from Davidson. See, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claim 7.

4. Rejection of Claim 6 under 35 USC 103(a)

Claim 6 stands rejected under 35 USC 103(a) as being unpatentable over Tanaka (U.S. Pat. No. 6,890,097 B2) in view of Nishizawa et al. (U.S. Pat. No. 5,401,099 A; hereinafter referred to as "Nishizawa").

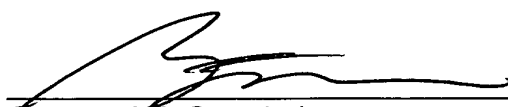
Claim 6 is believed to be allowable, at least, for reasons similar to why claim 1 is believed to be allowable, and because neither Tanaka nor Nishizawa teach that which is missing from Davidson (i.e., "during normal operation of the integrated circuit, and ***on-board the integrated circuit, supplying a constant current*** to the thermal diode. . .; emphasis added; see, claim 6). See, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claim 7.

5. Conclusion

In light of the above arguments, applicants respectfully request the timely issuance of a Notice of Allowance.

Respectfully submitted,
DAHL & OSTERLOTH, L.L.P.

By:



Gregory W. Osterloth
Reg. No. 36,232
Tel: (303) 291-3204